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NASA TECH BRIEF

Investigation of Pressurized Toroidal Shells

An analytical and experimental investigation was conducted to determine the effect of internal pressure on the behavior of thin-walled toroidal shells. The stresses and deformations that arise from pressurization alone are one subproblem; the reactions of a pressurized shell to an external load are the second. The analysis yielded an asymptotic formulation whose solution was in generally excellent agreement with experimental results on a 54-inch-diameter toroidal shell subjected to both pressurization and axial loading.

Note:

Complete details concerning this investigation are given in NASA CR-261, "Analytical and Experimental Investigation of Pressurized Toroidal Shells," by P. F. Jordan, available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Virginia 22151; price $3.00. Inquiries may also be directed to:

Technology Utilization Officer
Headquarters
National Aeronautics and Space Administration
Washington, D.C. 20546
Reference: B67-10117

Patent status:

No patent action is contemplated by NASA.

Source: The Martin Co.
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Category 05